MEDIUM TACTICAL VEHICLE REPLACEMENT (MTVR) AND LOGISTICS VEHICLE SYSTEM REPLACEMENT (LVSR) PROGRAMS

Industry/Government Partnership For Affordable Product Support

Presentation to:
Office of Secretary of Defense
Product Support Manager Conference
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Overview & Agenda

Overview

- MTVR and LVSR are workhorse vehicles for the USMC and are heavily used, including in theater
- PMO and OEM (Oshkosh) team to provide life cycle product support
- Challenging environment going forward due to lean budget forecasts

Agenda

- Program overviews
- Product support strategies and challenges
- Oshkosh initiatives
- Summary

MTVR and LVSR Program Overviews

UNCLASSIFIED

Medium Tactical Vehicle Replacement (MTVR)
"The Workhorse of the Marine Corps"

- The MTVR replaced the aging M809/M939 series 5-ton trucks with state-of-the-art commercial automotive technology beginning in 2001. The MTVR cargo truck has a 7.1-ton off road and 15-ton on road payload, and a 22-year service life. MTVR variants include the Dump, Wrecker, Tractor and HIMARS Re-Supply Vehicle. Features: On-Board diagnostics; independent "TAK-4" suspension; automatic traction control. Quantities Procured: USMC - 9,221; Navy - 1,855
- The MTVR Armor System (MAS) provides complete 360-degree protection as well as overhead and underbody protection for the crew compartment. The MAS is a permanent modification to the vehicle and includes an upgraded front suspension and cab rebuild. The kit includes a removable personnel carrier (with ballistic glass), air conditioning system, and machine gun mount. All vehicles in theater include MAS armor.
  Quantities Procured: USMC – 4,950; Navy - 448

Logistics Vehicle System Replacement (LVSR)
The USMC's Heavy Tactical Vehicle

- The Logistics Vehicle System Replacement (LVSR) is replacing the current Marine Corps heavy-tactical wheeled vehicle, the Logistics Vehicle System (LVS). As the Marine Corps' heavy-tactical distribution system, the LVSR Cargo variant will transport bulk liquids (fuel and water); ammunition; standardized containers; bulk, break-bulk, palletized cargo, and bridging equipment. The LVSR Cargo variant has a payload capacity of of 22.5 tons on road and 16.5 tons off-road. The LVSR Wrecker variant will perform heavy wrecker/recovery missions, while the LVSR Tractor variant will tow heavy engineer equipment and combat vehicles with the M870A2 40 ton Medium Heavy Equipment Trailer (MHET). Features: "TAK-4" Independent Suspension; Mechanical Rear Steer technology; "Command Zone" On-Board Diagnostics; single source lubrication system. Authorized Acquisition Objective (AAO) = 2,000 (1,459 Cargo; 381 Tractor; 160 Wrecker).
- The LVSR Add-On armor "B-kit" provides complete 360-degree protection as well as overhead and underbody protection for the crew compartment. AAO = 651.

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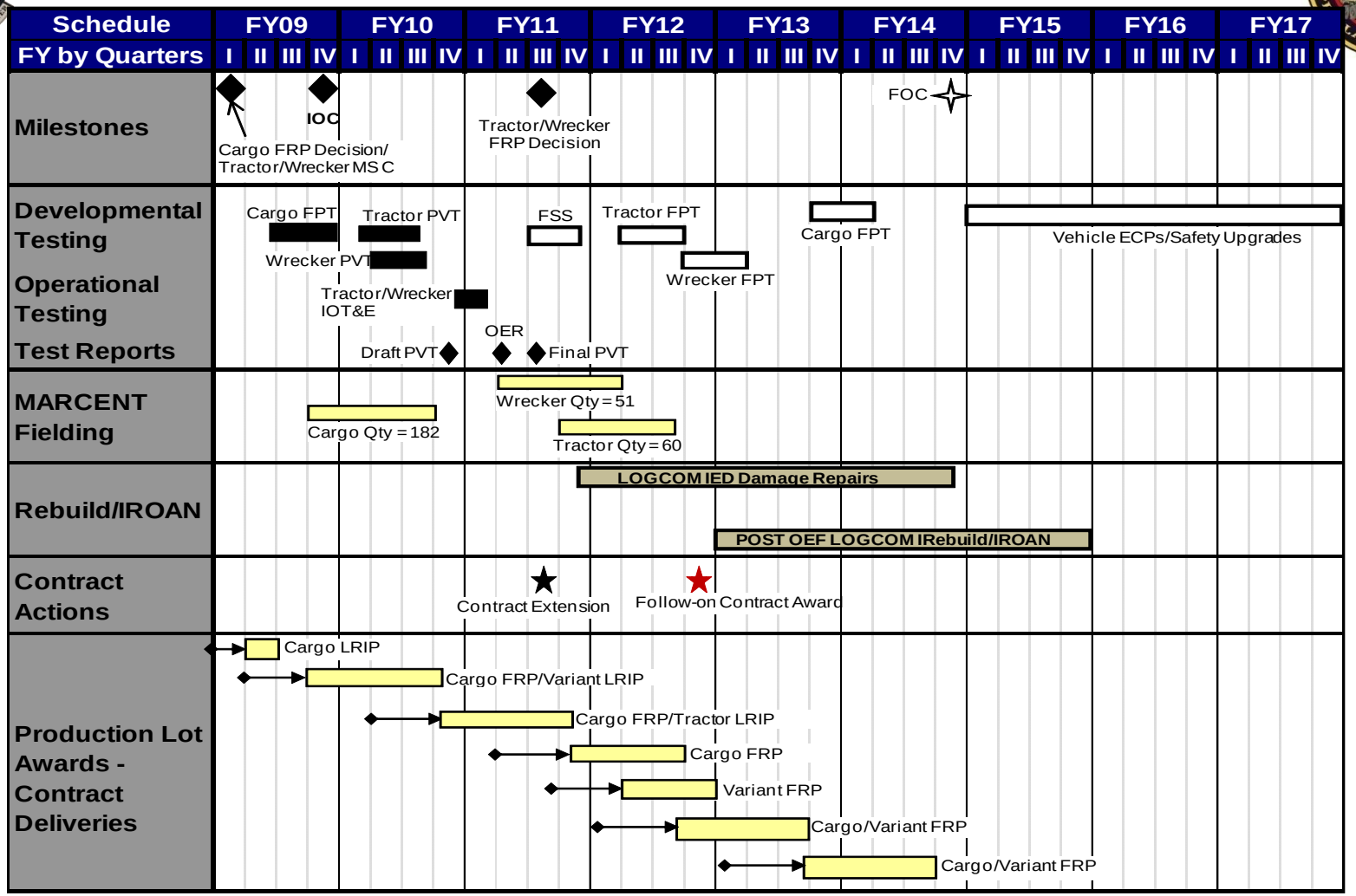
LVSR Schedule



Legend

- Objective Date
- Scheduled Date
- Milestone Actual
- Completed Test Period
- FOC Projected Date
- Lead time award to delivery
- Delivery Period

Status of Programs

- MTVR
  - ACAT IC - Operation and Sustainment phase
  - Initial Operational Capability: Nov 2001
  - Last Milestone Completed: Navy Gate 6 (May 2011)
  - Full Operational Capability: Sept 2011
  - Authorized Acquisition Objective: 8,500 (over 9,000 fielded)

- LVSR
  - ACAT II - Operation and Sustainment phase
  - Initial Operational Capability: Sept 2009
  - Last Milestone Completed: Tractor/Wrecker Full Rate Production DR (Apr 2011)
  - Full Operational Capability: 4th QTR FY 2014
  - Authorized Acquisition Objective: 2,000

MTVR and LVSR
Product Support Strategies & Challenges

Life Cycle Product Support Sustainment

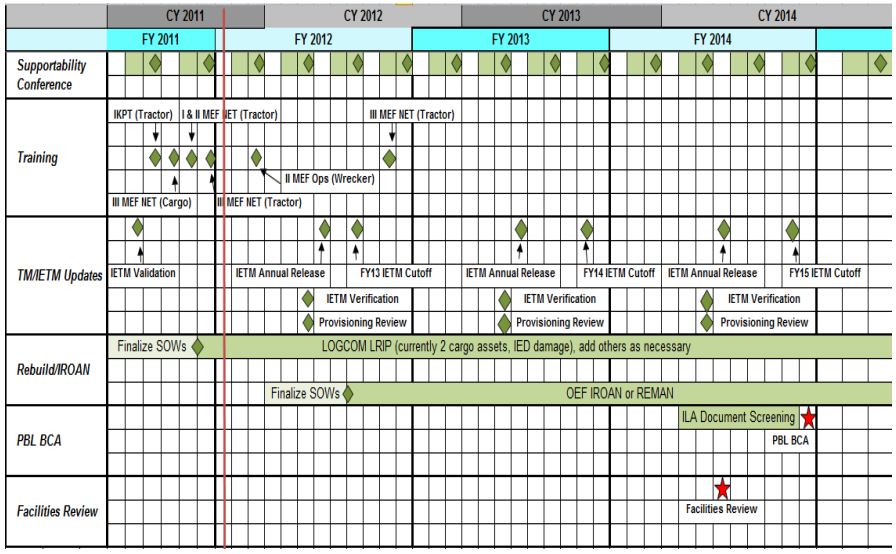
Product Support Strategy

- Three-tiered maintenance (USMC ROM) using organic Marine Corps capabilities, existing LVS manpower, facilities and infrastructure
- LVSR is designed to last the full 22 year life cycle without a mid-life rebuild; however, current theatre operations require some vehicles to be rebuilt upon return to CONUS. Two vehicles are on the Depot Master Work Schedule (MWS) for FY 12.
- User PBA between PM and Warfighter to monitor sustainment objectives

Metrics Data

Parameter	CPD Goal (Threshold)	Current Estimate (17 Oct 2011)	Test or Fielding Event Data Derived From
Availability Attribute - Ao (Cargo)	≥90%	Cargo 92% Tractor No data Wrecker 96%	Systems Operational Effectiveness Tool (SOE)
Reliability Attribute -MMBOMF	≥4,000 Miles	Cargo 6,945 Miles Tractor 2,955.5 Miles Wrecker 2,135.8 Miles	IOT&E
Maintainability Attribute - MTTR	≤ 3 HRs	Cargo 1.076 Hours Tractor 0.5 Hours Wrecker 0.61 Hours	IOT&E

Sustainment Schedule



O&S Data

Cost Element	Original Baseline (Mar 11)*	Current costs
1.0 Unit-Level Manpower	0.17	TBD
2.0 Unit Operations	3.42	TBD
3.0 Maintenance	15.81	TBD
4.0 Sustaining Support	4.52	TBD
5.0 Continuing System Improvements	TBD	TBD
6.0 Indirect Support	TBD	TBD
Annual Cost per Active Vehicle ($K)	23.93	TBD

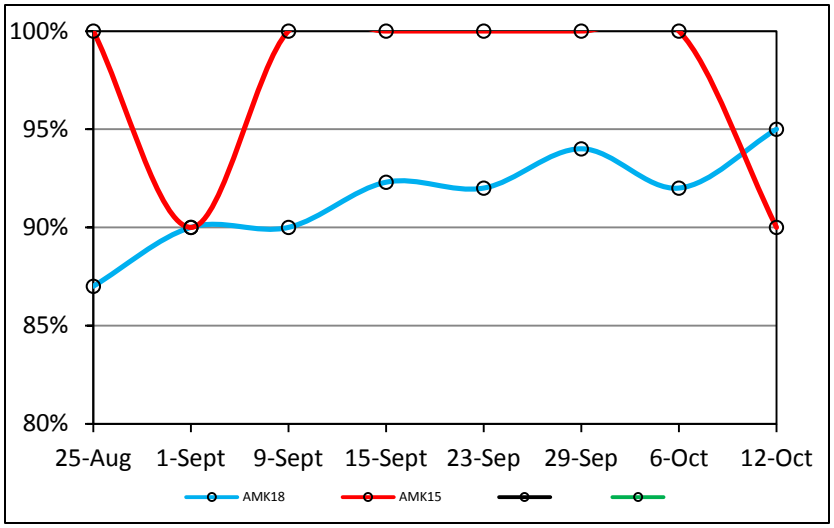
*derived from the LVSR Joint cost position (approved LCCE) dated 23 Mar 2011

Total O&S Costs **	Current Cost (Mar 11)
Base year 2011$M	949.08
Then year $M	1,160.34

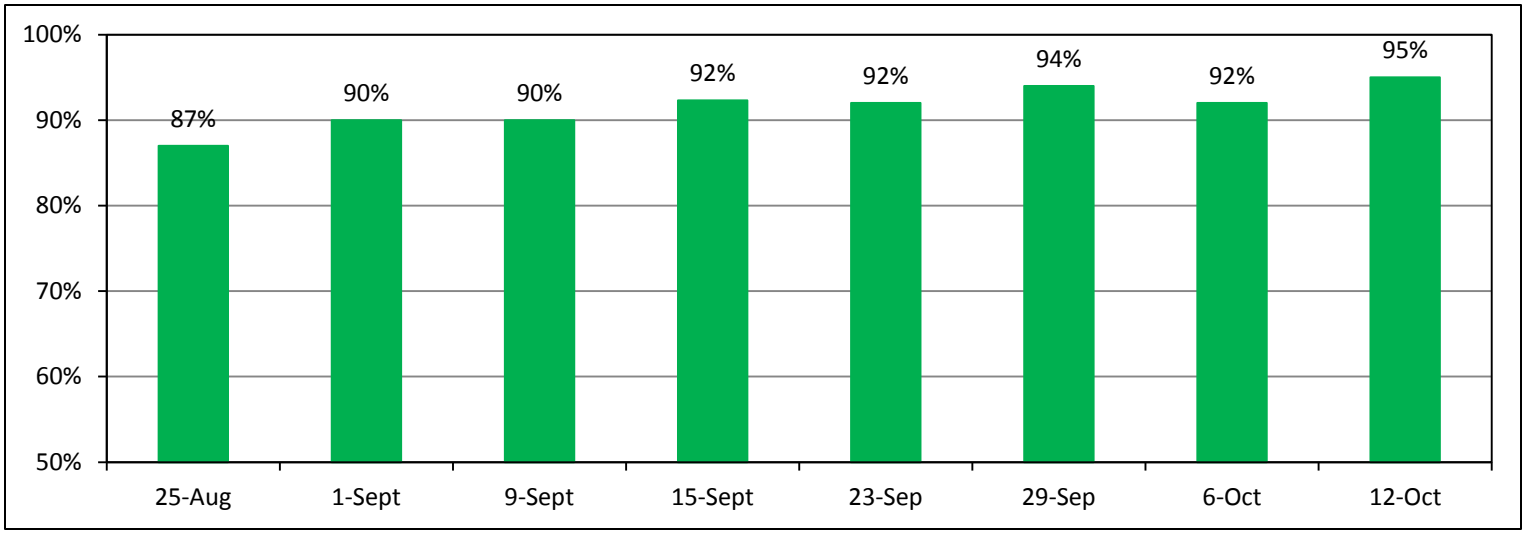
**Total O&S costs based on 2000 vehicles and a 22 year life

LVSR WEEKLY READINESS

LVSR OEF READINESS



LVSR FLEET READINESS



Current as of 12 October 2011

Results of the LVSR Full Rate Production Decision Independent Logistics Assessment (ILA)

Independent Logistics Assessment Item	Rating	Rationale
ILS Management	Supports Activities	
Budgeting and Funding	Supports Activities	
Maintenance Planning/Execution	Supports Activities	
Design Interface	Supports Activities	
RAM Maturity Growth	Supports Activities	
Supply Support	Supports Activities	
Support and Common Equipment	Supports Activities	
Human Systems Integration (MPT&E)	Supports Activities	Initially yellow due to MPTP not being signed during assessment; subsequently signed 30 Mar 2011 and close-out letter confirms a green rating. Revision to MPTP accommodates AAO increase from 1699 to 2000
Facilities & Platform Integration	Supports Activities	
Safety & Environment	Supports Activities	
Product/Technical Data	Supports Activities	
Computer Resources & SW Support	Supports Activities	
PHS&T	Supports Activities	

Legend

Supports Activities	Some Gaps Exist	Significant Gaps Exist

LVSR Challenges

- Fielding new vehicles to theater
  - Supported with Oshkosh Field Service Representatives and Initial Issue Provisioning packages
  - Developed Battle Damage & Repair kits to address combat damage
  - Coordinated training for units prior to deployment per MEF request
- Initial provisioning and assignment of priority coding
  - Some glitches in data handoff between LOGCOM and DLA
  - Mitigated through close coordination and DLA long term supply contracts with Oshkosh
- Warranty management
  - Oshkosh very responsive in addressing warranty issues
  - Use of PMO liaison officers at each MEF for deprocessing and warranty claims
- Coordination with Defense Logistics Agency
  - DLA Systems Support Manager very engaged in the program
  - DLA Logistics Support Partnering Agreement

MTVR Life Cycle Product Support Sustainment

Product Support Strategy

Sustainment Approach

Logistics Support:
FY12 and beyond: transition from CLS to PB for MTVR sustainment.
FY12 is CLS follow-on contract extension. FY13 is start of contract for the PB effort.

Issues:
None

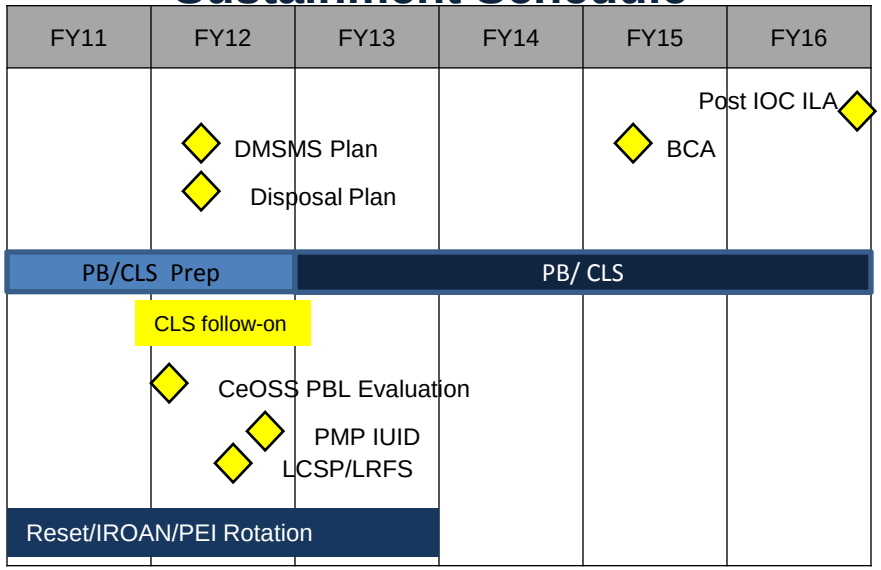
Resolution:
None

Metrics Data

Metric	Original Goal FY02-05*	Current Goal FY06-09**	FY 11 Actual
Material Availability (8/31/11)	85%	90%	87.4%
NMCS (8/31/1i)	5%	5%	5.7%
NMCM (8/31/11)	5%	5%	5.0%
MDT	31 #	35 ##	35.0 (DAYS)

ATLASS II Data ## MERIT Data

Sustainment Schedule



O&S Data

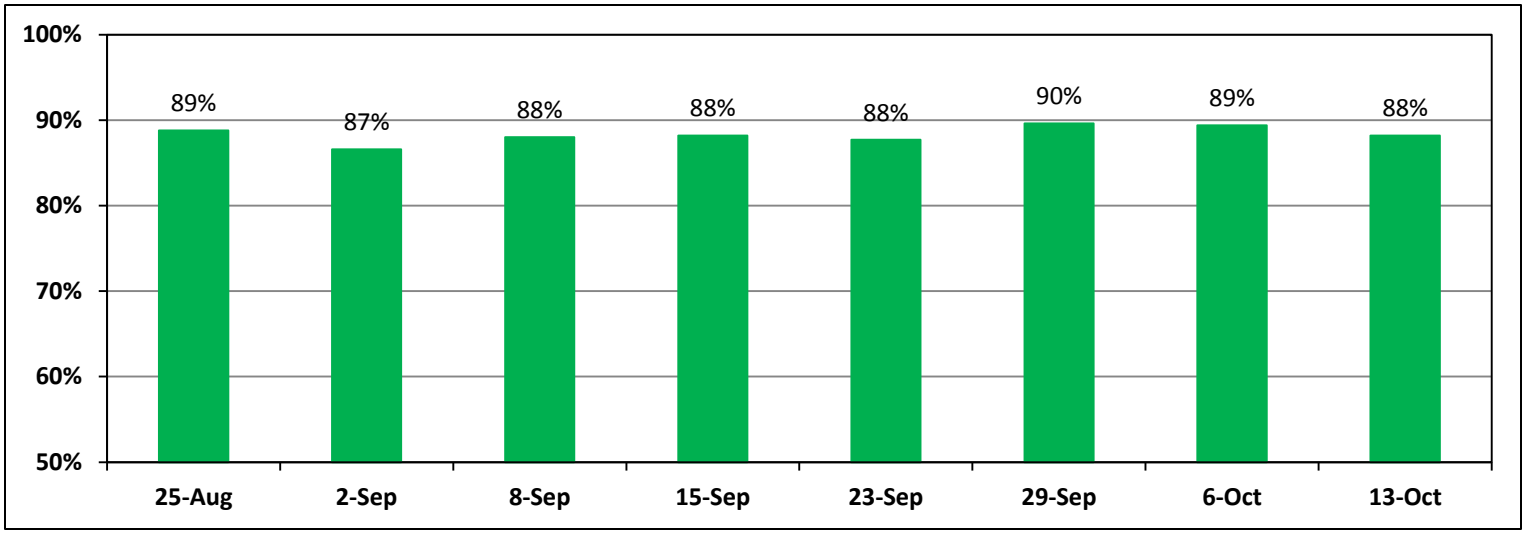
Cost Element	*Per Vehicle Cost (AVE) (FY02-05)	**Per Vehicle Cost (AVE) (FY06-09)	Per Vehicle Current Cost (FY10-11)
Repair Parts	463.84	2,439.79	2,005.64
Class IX	8,226.50	8,077.59	5,523.60
Indirect (FSR Support)	1,642.01	633.07	100.41
IROAN	0	0	5895.10
Total Cost per Vehicle	**10,332.35**	**11,150.45**	**13524.55**

** MTVR Unarmored Fleet*

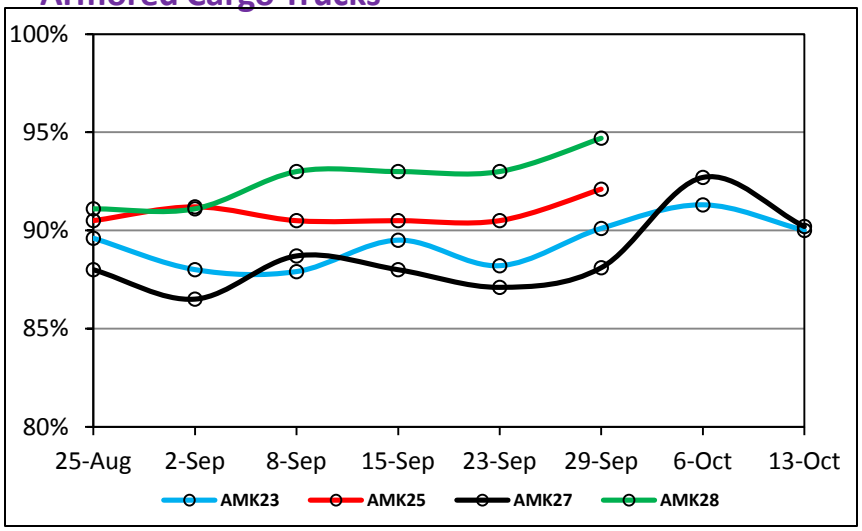
***MTVR Armored/Unarmored Fleet*

MTVR WEEKLY READINESS

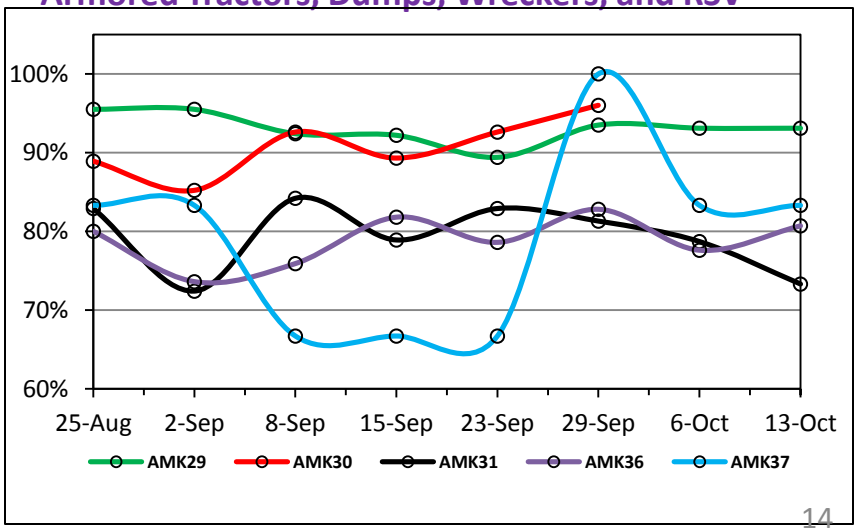
MTVR OEF READINESS



Armored Cargo Trucks



Armored Tractors, Dumps, Wreckers, and RSV



Current as of 13 Oct 2011

MTVR Transition to Performance Based Support

- History:
  - MTVR Program designated by National Defense Authorization Act (NDAA) as pilot program for Contractor Logistics Support (CLS)
  - Awarded 3 year CLS contract to Oshkosh Corp with 7 option years in (2001)
  - Contract currently managed by Marine Corps Logistics Command (LOGCOM); will expire end of Sept 2012

- Current Actions:
  - Completed detailed Business Case Analysis for PBL
  - BCA recommended continuation of CLS, with addition of performance based elements
  - PSI will be incentivized to improve customer support metrics metrics identified in PB Agreement(s)
  - BCA COA recommended sole source with Oshkosh Corporation for PSI support
    - However, PM has decided to compete the PSI/CLS support contract

Results of MTVR Post-IOC Independent Logistics Assessment (ILA)

Independent Logistics Assessment Item	Rating	Rationale
ILS Management	G	
Budgeting and Funding	G	
Maintenance Planning/Execution	G	
Design Interface	G	APM-Engr has created interface control documents (ICD) to manage design.
RAM Maturity Growth	G	
Supply Support	G	
Support and Common Equipment	G	
Human Systems Integration (MPT&E)	G	
Facilities & Platform Integration	G	
Safety & Environment	G	
Product/Technical Data	G	
Computer Resources & SW Support	N/A	Not required
PHS&T	G	

Legend

Supports Activities	Some Gaps Exist	Significant Gaps Exist

MTVR Challenges

- Empowering Product Support Integrator (PSI) and PMO with real time product status information
  - Ability to quickly identify and resolve critical issues
  - Coordination with multiple data sources
  - Data quality often suspect
- Transition to Next Generation IETM software
  - Close coordination with OEM resulting in seamless transition
- Configuration Management
  - Tracking multiple vehicle configurations
  - Working closely with OEM and LOGCOM
- Contractual issues often impact speed of meeting urgent OpFOR requirements
  - Need flexible contract vehicles for quick response
- Coordination and communication with outside agencies (DLA, Marine Corps Logistics Command)

Working Together for Product Support

John Bryant, Vice President / General Manager
USMC Programs
Oshkosh Defense

3 November 2011

Oshkosh Corporation at a Glance

Access Equipment

JLG

Lull

SKYTRAK

Defense

OSHKOSH DEFENSE

Fire & Emergency

Pierce

OSHKOSH

MEDTEC

JERR-DAN

FRONTLINE COMMUNICATIONS

KEWAUNEE FABRICATIONS

SMIT MOBILE EQUIPMENT B.V.

OSHKOSH SPECIALTY VEHICLES

Commercial

McNeilus

OSHKOSH

LONDON

IMT

CON-E-CO

OSHKOSH DEFENSE

WHEN EXPERIENCE COUNTS.

Oshkosh Defense – USMC Programs

MTVR Cargo

MTVR Wrecker

MTVR Dump

Oshkosh Defense – USMC Defense Program Center

LVSR Cargo

LVSR Tractor

LVSR Wrecker

Oshkosh Programs Overview

- **Logistic Vehicle System Replacement LVSR (22 TON)**
  - Variants: Cargo, Tractor, Wrecker
  - Total purchased to date: 1,806

- **Support Concept:**
  - Organic Support via USMC Logistics
    - Oshkosh provides Field Service Representatives and Technical Publication development under the base contract
    - Parts support is provided through DLA
      - Oshkosh is a parts provider to DLA
    - Service support is provided by USMC maintenance activities
      - Oshkosh provides a service capability upon request of PM

Oshkosh Programs (continued)

- **Medium Tactical Vehicle Replacement MTVR (7 TON)**
  - Variants: Cargo, Wrecker, Tractor, Dump, HIMARS RSV
  - Total purchased to date: 11,011 (includes Navy Seabee vehicles)

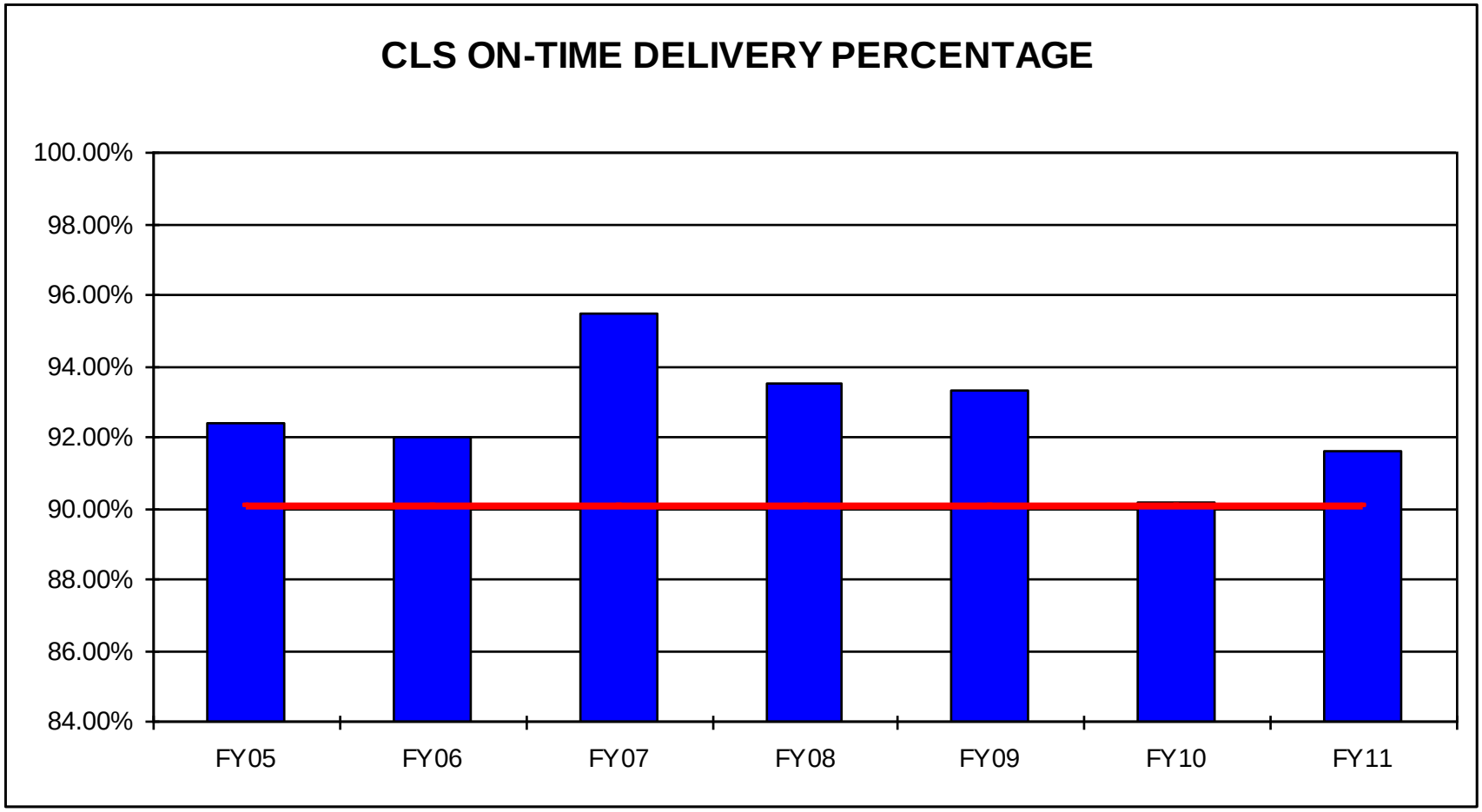
- **Support Concept:**
  - Contractor Logistics Support (CLS)
  - Provides OEM managed contract parts (SOS LA9), service support, Field Service Representatives, Technical Publication development and updates
  - 10 year contract FY01-FY11, FY12 Bridge Contract awarded

- **Program Interface:**
  - Government and Oshkosh PMs work together to focus on the warfighter requirements both CONUS and OCONUS.
  - Communications through weekly OEF phone meetings.
  - Quarterly IPRs with Government PMs

Oshkosh CLS Parts Delivery Times

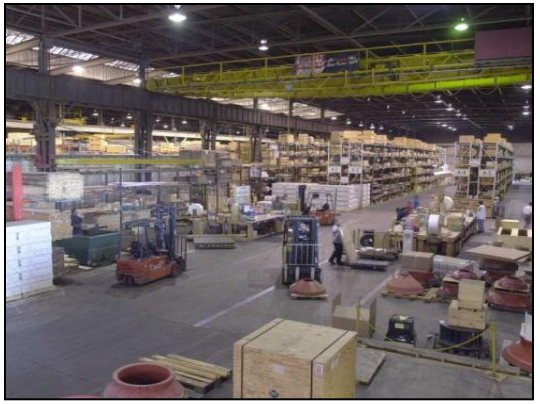
PRIORITIES		DELIVERY REQUIREMENTS (Working days)	
		CONUS	OCONUS
01—02		3	4
03		5	5
04—15		10	10

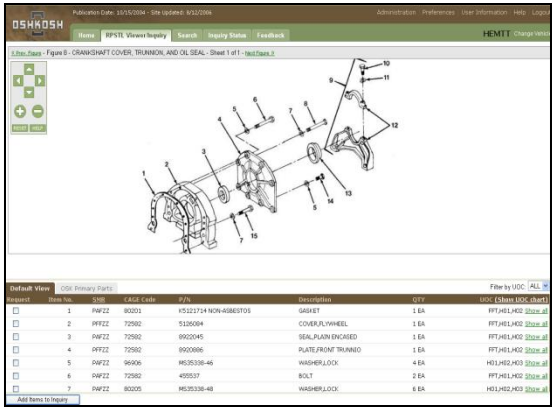
Oshkosh CLS MTVR Parts Delivery



Oshkosh Parts Support

- Warehouse network provides wholesale-level worldwide distribution of parts
- Critical/fast-moving parts stocked regionally
- Component rebuild/exchange programs
- 24 hours/7days a week support
- Oshkosh FAST℠ team network provides retail support
- In-stock parts ship in 24 hours, with overnight deliveries when needed
- Web-based FAST℠ PRO application provides online access to parts support





OSHKOSH DEFENSE

WHEN EXPERIENCE COUNTS.

Regional Logistics Centers

Oshkosh Regional Logistics Centers

- **Established locally to I MEF and II MEF**
  - **RLC North Carolina, located in Jacksonville, NC**
  - **RLC California, located in Temecula, CA**
- **Provides OEM local product support**
  - **Corrective/Preventive maintenance**
  - **RESET capability**
    - **IROAN**
    - **Navy Refurbishment**

Refurbish Program

IROAN Wrecker with OEM certification

Navy MTVR refurbishment

Oshkosh Remanufactured MTVRs

Oshkosh Life Cycle Support Efforts

- **MTVR Family of Vehicles (FOV)**
  - **OEM Manages over 4000 parts in support of the MTVR.**
  - **Established repairable program of MTVR end item components.**
  - **Manage parts obsolescence through suppliers and product improvement initiatives.**
  - **Extensive 22 year corrosion prevention plan is designed into vehicles.**
  - **Reduced parts foot print by focusing commonality of parts between variants. TAK-4 suspension, engines, transmissions and body components.**

Oshkosh Life Cycle Support Efforts

- **LVSR Family of Vehicles**
  - **Extensive 22 year corrosion prevention plan is designed into vehicles.**
  - **Standardized vehicle configuration from engine compartment forward**
  - **Commonality of parts:**
    - **84% commonality between the LVSR Cargo and Tractor variant**
    - **72% commonality between the LVSR Tractor and Cargo variant**
  - **Single Fluid System**
  - **Proven performance from Oshkosh's TAK-4 independent suspension system.**

What Works

- **Program Success**
  - **Common focus on warfighter needs**
    - **Its about readiness – deadlining parts**
    - **Weekly contact with warfighter**
  - **Open communication between Oshkosh/USMC teams**
  - **Quarterly joint reviews to provide overviews of program and contract activities**
  - **Rapid development meet urgent needs from the field**
    - **Automatic Fire Extinguishing Systems (AFES)**
    - **UIK Armor**
    - **LVSR power distribution and pass thru panels**

Opportunities

- **Life Cycle Support planning**
  - **RESET Initiatives**
  - **Multiple platform parts and service support initiatives (LVSR, MTVR, M-ATV)**
- **Equipment integration and insertion planning**
  - **Design and install**
  - **Configuration management**
  - **Space claim mitigation**
  - **Energy requirements (radios, BFT, Mine Rollers, auxiliary equipment)**
- **Move toward PBL – One belly button for NMCS rates**

Thank You


OSHKOSH
THE WORLD'S BRAVEST MEN AND WOMEN
BACKED BY THE WORLD'S TOUGHEST VEHICLES.

Summary

- Close coordination and teamwork between PMO and OEM required to execute effective product support strategy
- Real time communication and information flow between all parties essential to effective product support
- Important to establish flexible contracting vehicles to address urgent requirements
  - But competition is still important to control costs
- Performance based support and establishing dedicated Product Support Managers promise significant improvement in executing product support strategy

Questions?